DR 1107
DECEMBER 1979

METEOROLOGICAL DATA REPORT

19304D MLRS
Missile No. 1130
Round No. V-99
18 December 1979

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 19304D MLRS, Missile Number 1130, Round Number V-99 are presented in tabular form.

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CONTENTS

INTRODUCTION

19304D MLRS, Missile Number 1130, Round Number V-99, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1139 MST, 18 December 1979. The scheduled launch time was 1030 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

   a. Surface

   (1) Standard surface observations to include pressure, temperature (^{o}C), relative humidity, dew point (^{o}C), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

   (2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

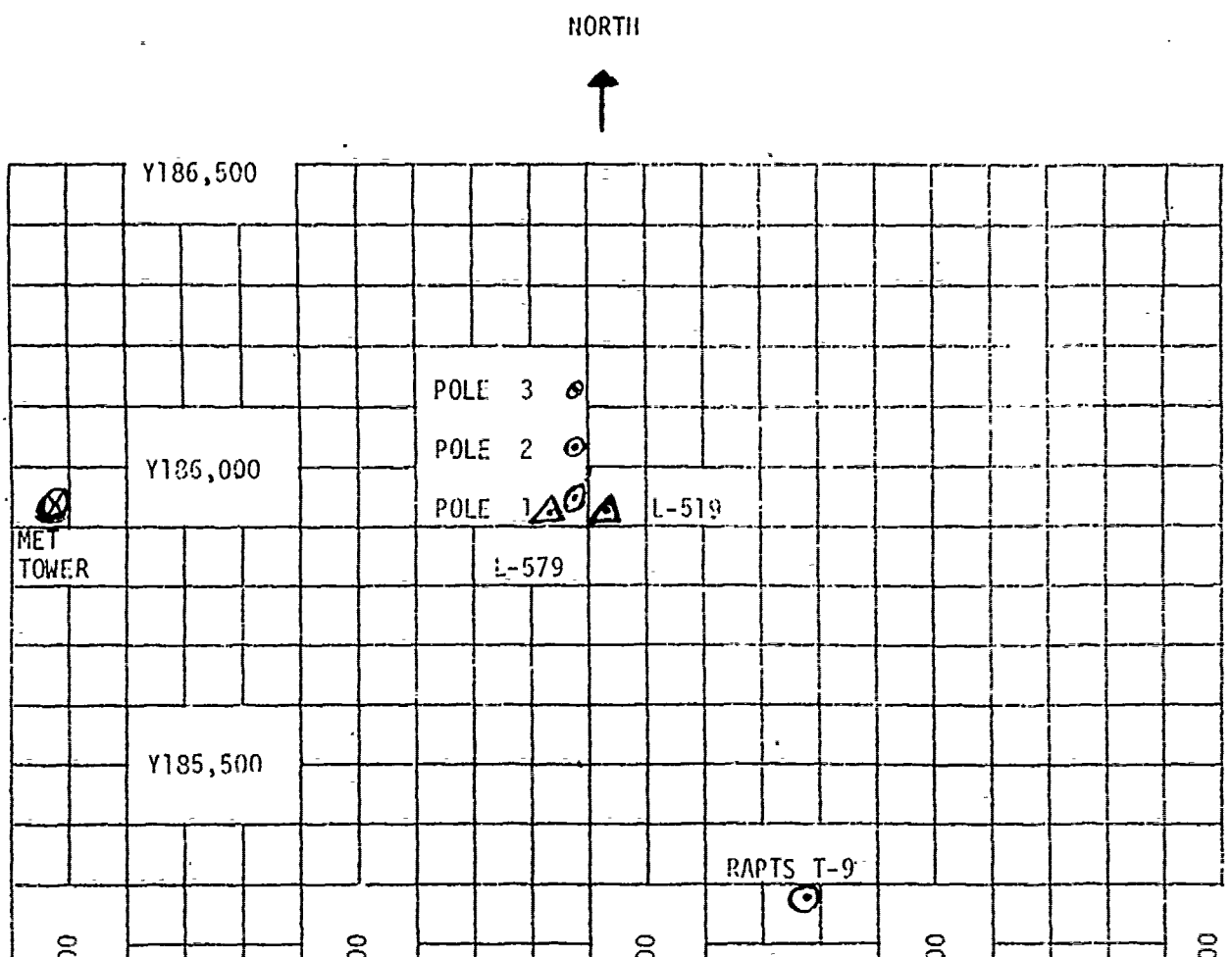
   b. Upper Air

   (1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE
LC-33 2Km
Nick 2Km

   (2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 78,500 feet in 500-feet increments.

SITE AND TIME
WSD 1130 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.

2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.

   (a) Pole #1 - 38.7 ft.

   (b) Pole #2 - 53.0 ft.

   (c) Pole #3 - 83.6 ft.

3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

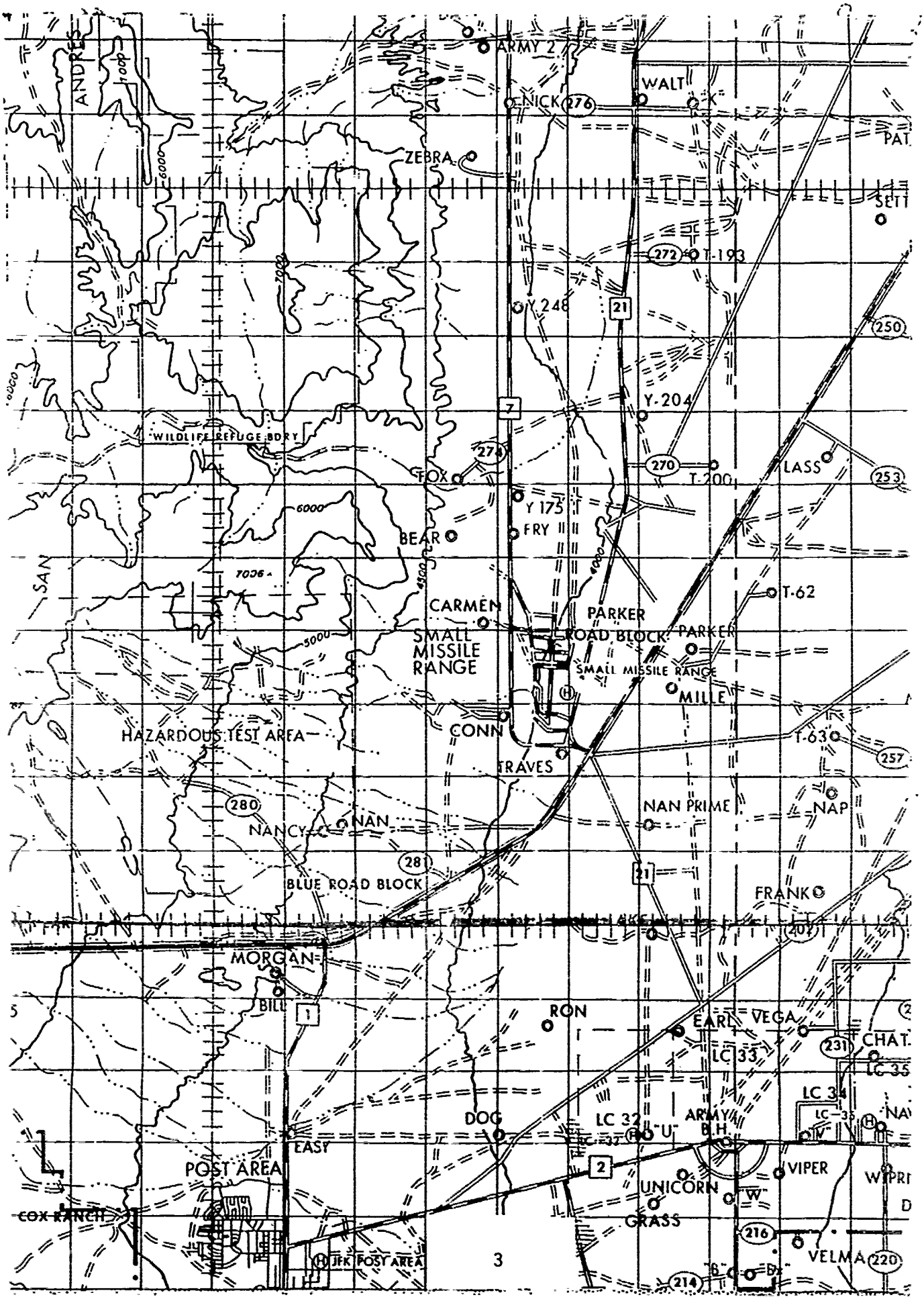

ARMY 2
WALT
NICK
276
ZEBRA
PAT
SETT
272
T-193
Y 248
21
250
Y-204
7
WILDLIFE REFUGE BDRY
274
FOX
270
T-200
LASS
253
Y 175
FRY
BEAR
6000
4000
SAN
T-62
CARMEN
PARKER
ROAD BLOCK
PARKER
SMALL MISSILE RANGE
SMALL MISSILE RANGE
MILLE
CONN
T-63
257
HAZARDOUS TEST AREA
TRAVES
NAN PRIME
NAP
280
NANCY
NAN
28
BLUE ROAD BLOCK
21
FRANK
207
MORGAN
BILL
1
RON
EARL
VEGA
231
CHAT
LC 33
LC 34
LC 35
DOG
LC 32
ARMY
B.H.
EASY
POST AREA
2
VIPER
UNICORN
GRASS
COX RANCH
JFK POST AREA
216
VELMA
220
214

TABLE 1. Surface Observations taken at 1139 MST, 18 December 1979, at LC-33, 19304D-MLRS, Missile Number 1130, Round Number V-99.

ELEVATION	3977.30	FT/MSL
PRESSURE	889.2	MBS
TEMPERATURE	6.4	^{o}C
RELATIVE HUMIDITY	55	%
DEW POINT	-2.0	^{o}C
DENSITY	1104	GM/M^3
WIND SPEED	CALM	KTS
WIND DIRECTION		DEGREES
CLOUD COVER	.1	C_i

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	MISG	01	-30	174	02	-30		CALM
-20	MISG	01	-20	177	02	-20		CALM
-10	MISG	01	-10	160	02	-10		CALM
0.0	MISG	01	0.0	160	02	0.0		CALM
+10	MISG	01	+10	160	02	+10		CALM

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484.982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED K.	T-TIME SEC	DIR DEG	SPEED KTS
-30	117	02	-30	127	03
-20	114	02	-20	126	03
-10	107	03	-10	125	02
0.0	102	03	0.0	128	03
+10	102	03	+10	128	02

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	125	02	-30	107	02
-20	125	02	-20	107	02
-10	125	02	-10	107	02
0.0	125	03	0.0	107	02
+10	128	03	+10	107	02

TABLE 4

RELEASED FROM LC-33 DATE 18 December 1979 TIME 1120 MST

TRACKER COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
90	312	04
150	198	04
210	165	02
270	138	03
330	160	03
390	215	03
500	246	01
650	124	02
800	288	05
950	267	04
1150	243	06
1350	253	08
1550	259	12
1750	270	18
2000	275	23

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-33 DATE 18 December 1979 TIME 1139 MST

TRACKER COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ___.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
90	MISG	MISG
150	070	01
210	126	01
270		CALM
300	105	02
390	180	01
500	213	02
650	295	04
800	290	05
950	270	01
1150	249	05
1350	245	09
1550	266	14
1750	270	19
2000	270	23

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

TABLE 6

RELEASED FROM NICK SITE DATE 18 December 1979 TIME 1139 MST

TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC		CALM
90	243	02
150	225	01
210	180	02
270	198	03
330	198	03
390	180	02
500	180	02
650	180	01
800	248	08
950	255	08
1150	248	08
1350	257	09
1550	270	14
1750	270	15
2000	273	19

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

STATION ALTITUDE 3989.00 FEET MSL
18 DEC. 79 1130 HRS MST
ASCENSION NO. 535

SIGNIFICANT LEVEL DATA
352002535
WHITE SANDS
TABLE 7

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEW/DIAL CENTIGRADE	REL.HUM. PERCENT
890.0	3989.0	5.8	-5.3	52.0
878.8	4329.8	6.4	-3.6	48.0
868.0	4661.6	4.0	-2.0	62.0
850.9	5222.4	5.0	-4.3	51.0
837.2	5629.7	5.7	-6.2	36.0
815.6	6301.5	7.9	-11.4	24.0
776.4	7670.0	8.7	-14.3	18.0
727.6	9428.4	7.5	-17.4	15.0
700.0	10468.4	4.5	-11.1	31.0
555.2	16514.2	-9.4	-23.3	31.0
538.0	17313.6	-9.6	-29.4	18.0
522.0	18078.9	-10.5	-30.6	17.0
505.6	18873.8	-12.4	-32.3	17.0
500.0	19163.7	-12.2	-31.0	18.0
481.8	20092.6	-14.2	-26.9	33.0
400.0	24633.7	-25.7	-36.3	36.0
370.2	26463.4	-30.3	-39.5	40.0
350.0	27767.7	-33.8	-40.4	51.0
336.8	28651.7	-35.6	-39.2	69.0
317.6	29986.1	-39.2	-43.0	61.0
300.0	31267.4	-41.0	-47.5	49.0
293.0	31794.8	-42.1	-49.6	43.0
250.0	35283.0	-48.5		
200.0	40024.4	-57.4		
177.8	42461.1	-59.8		
168.6	43559.3	-58.3		
156.0	45165.8	-59.6		
150.0	45975.6	-59.1		
136.4	47932.6	-60.8		
128.8	49101.9	-63.2		
118.2	50839.7	-64.2		
110.0	52293.4	-63.6		
100.0	54214.7	-65.5		
80.6	58516.8	-68.1		
78.0	59171.4	-65.3		
70.0	61342.3	-66.1		
50.0	68132.7	-63.0		
45.4	70093.3	-63.5		
33.8	76182.5	-56.5		
30.0	78688.2	-56.0		

STATION ALTITUDE 3989.00 FEET MSL
18 DEC. 79 1130 HRS MST
ASCENSION NO. 535

UPPER AIR DATA
352002053S
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	890.0	5.8	-3.3	52.0	1109.2	651.3	.0	.0	1.000270
4000.0	889.0	5.8	-3.3	51.9	1108.7	651.4	257.4	.0	1.000270
4500.0	873.2	5.2	-3.1	55.2	1090.7	650.6	257.4	.5	1.000267
5000.0	857.1	4.6	-3.6	55.4	1072.6	649.9	257.4	1.1	1.000262
5500.0	841.3	5.5	-6.8	40.8	1050.1	650.8	257.4	1.6	1.000252
6000.0	825.8	6.9	-9.7	29.4	1025.8	652.4	259.9	2.6	1.000243
6500.0	810.6	8.0	-11.8	23.1	1003.2	653.6	261.3	3.6	1.000235
7000.0	795.8	8.3	-12.7	20.9	983.9	653.9	260.2	3.3	1.000230
7500.0	781.3	8.6	-13.8	18.7	965.0	654.3	261.7	3.4	1.000225
8000.0	767.0	8.5	-14.8	17.4	947.9	654.1	258.7	7.2	1.000220
8500.0	753.0	8.1	-15.7	16.6	931.7	653.7	262.6	11.3	1.000216
9000.0	739.2	7.8	-16.6	15.7	915.8	653.3	267.2	16.2	1.000212
9500.0	725.7	7.3	-16.7	16.1	900.6	652.7	270.2	19.3	1.000209
10000.0	712.3	5.9	-13.2	23.8	888.4	651.1	273.0	20.5	1.000209
10500.0	699.2	4.4	-11.2	31.0	876.2	649.5	272.8	18.5	1.000208
11000.0	685.9	3.3	-12.2	31.0	863.2	648.1	271.3	15.6	1.000204
11500.0	672.9	2.1	-13.2	31.0	850.5	646.8	269.6	18.0	1.000200
12000.0	660.1	1.0	-14.2	31.0	837.9	645.4	268.6	20.9	1.000197
12500.0	647.6	-.2	-15.2	31.0	825.5	644.0	268.1	24.3	1.000193
13000.0	635.3	-1.3	-16.2	31.0	813.3	642.6	268.2	24.4	1.000190
13500.0	623.2	-2.5	-17.2	31.0	801.3	641.3	267.0	18.7	1.000187
14000.0	611.4	-3.6	-18.2	31.0	789.5	639.9	265.7	16.0	1.000183
14500.0	599.8	-4.8	-19.3	31.0	777.9	638.5	262.3	15.3	1.000180
15000.0	588.4	-5.9	-20.3	31.0	766.4	637.1	262.2	15.3	1.000177
15500.0	577.2	-7.1	-21.3	31.0	755.2	635.7	262.2	15.3	1.000174
16000.0	566.3	-8.2	-22.3	31.0	744.1	634.3	259.7	13.5	1.000171
16500.0	555.5	-9.4	-23.3	31.0	733.2	632.9	257.3	12.2	1.000168
17000.0	544.7	-9.5	-26.7	23.1	719.4	632.7	256.4	12.2	1.000164
17500.0	534.1	-9.8	-29.7	17.8	706.3	632.3	257.5	13.7	1.000160
18000.0	523.6	-10.4	-30.6	17.1	694.0	631.0	258.7	17.0	1.000157
18500.0	513.4	-11.5	-31.6	17.0	683.3	630.3	260.4	20.6	1.000155
19000.0	503.3	-12.3	-32.0	17.4	671.9	629.3	260.7	24.3	1.000152
19500.0	493.3	-12.9	-29.4	23.4	660.2	628.6	261.9	24.6	1.000150
20000.0	483.6	-14.0	-27.2	31.5	649.7	627.3	263.4	25.1	1.000148
20500.0	473.8	-15.2	-27.7	33.3	639.7	625.8	265.8	25.8	1.000146
21000.0	464.2	-16.5	-29.8	33.6	629.8	624.3	267.5	26.9	1.000144
21500.0	454.8	-17.8	-29.8	33.9	620.1	622.7	268.4	28.5	1.000141
22000.0	445.6	-19.0	-30.8	34.3	610.6	621.2	268.5	30.1	1.000139
22500.0	436.5	-20.3	-31.8	34.6	601.2	619.6	268.2	31.6	1.000136
23000.0	427.7	-21.6	-32.9	34.9	592.0	618.0	267.4	33.4	1.000134

STATION ALTITUDE 3989.00 FEET MSL
18 DEC. 79 1130 HRS MST
ASCENSION NO. 555

UPPER AIR DATA
352002055
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	419.0	-22.8	-33.9	35.3	583.0	616.5	256.7	35.3	1.000132
24000.0	410.5	-24.1	-35.0	35.6	574.1	614.9	256.6	38.1	1.000130
24500.0	402.2	-25.4	-36.0	35.9	565.3	613.3	256.6	40.7	1.000128
25000.0	393.8	-26.6	-36.9	36.8	556.4	611.8	256.5	42.7	1.000126
25500.0	385.6	-27.9	-37.8	37.9	547.6	610.2	256.0	44.3	1.000123
26000.0	377.5	-29.1	-38.6	39.0	538.9	608.6	254.0	45.2	1.000121
26500.0	369.6	-30.4	-39.5	40.3	530.3	607.0	252.4	46.6	1.000119
27000.0	361.8	-31.7	-39.8	44.5	521.9	605.4	251.3	48.7	1.000117
27500.0	354.1	-33.1	-40.1	48.7	513.7	603.7	250.2	51.1	1.000116
28000.0	346.5	-34.5	-40.0	55.7	505.2	602.2	249.2	53.8	1.000114
28500.0	339.0	-35.3	-39.4	65.9	496.4	600.9	248.6	56.0	1.000112
29000.0	331.7	-36.5	-40.4	66.9	488.2	599.3	244.1	58.2	1.000110
29500.0	324.5	-37.9	-42.1	63.9	480.4	597.6	242.3	60.4	1.000108
30000.0	317.4	-39.2	-43.9	60.9	472.6	595.9	240.9	62.6	1.000106
30500.0	310.4	-39.9	-45.3	56.2	463.6	595.0	240.6	64.2	1.000104
31000.0	303.6	-40.6	-46.7	51.5	454.8	594.1	240.9	65.6	1.000102
31500.0	296.9	-41.5	-48.4	46.4	446.4	593.0	241.6	66.0	1.000100
32000.0	290.3	-42.5	-50.5	40.5**	438.3	591.7	242.3	66.6	1.000098
32500.0	283.7	-43.4	-52.7	34.3**	430.2	590.5	243.2	68.4	1.000096
33000.0	277.4	-44.3	-55.2	28.1**	422.2	589.3	243.7	70.3	1.000094
33500.0	271.1	-45.2	-58.0	22.0**	414.4	588.2	243.7	72.4	1.000092
34000.0	265.0	-46.1	-61.3	15.8**	406.7	587.0	243.5	72.9	1.000091
34500.0	259.1	-47.1	-65.7	9.7**	399.2	585.8	243.2	71.1	1.000089
35000.0	253.2	-48.0	-73.4	3.5**	391.8	584.6	242.9	70.0	1.000087
35500.0	247.5	-48.9			384.4	583.4	242.8	69.8	1.000086
36000.0	241.7	-49.8			377.1	582.2	242.5	70.9	1.000084
36500.0	236.1	-50.8			369.9	580.9	242.1	74.0	1.000082
37000.0	230.6	-51.7			362.8	579.7	242.0	76.3	1.000081
37500.0	225.2	-52.7			355.9	578.5	242.2	76.6	1.000079
38000.0	220.0	-53.6			349.1	577.2	242.4	76.7	1.000078
38500.0	214.9	-54.5			342.4	576.0	242.8	74.9	1.000076
39000.0	209.9	-55.5			335.9	574.8	243.1	72.9	1.000075
39500.0	205.0	-56.4			329.5	573.5	243.3	69.0	1.000073
40000.0	200.2	-57.4			323.2	572.3	243.5	65.1	1.000072
40500.0	195.5	-57.9			316.3	571.6	243.4	60.2	1.000070
41000.0	190.8	-58.4			309.5	571.0	243.2	55.1	1.000069
41500.0	186.2	-58.9			302.8	570.3	242.9	50.9	1.000067
42000.0	181.8	-59.3			296.2	569.6	242.5	46.8	1.000066
42500.0	177.5	-59.7			289.7	569.1	242.2	43.2	1.000065
43000.0	173.2	-59.1			281.9	570.0	241.9	39.7	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
18 DEC. 79 1130 HRS MST
ASCENSION NO. 535

UPPER AIR DATA
352002535
WHITE SANDS

TABLE 8 (CONT)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	169.1	-58.4			274.3	570.9	242.0	36.4	1.000061
44000.0	165.0	-58.7			266.1	570.6	242.7	33.2	1.000060
44500.0	161.1	-59.1			262.1	570.0	243.5	30.2	1.000058
45000.0	157.3	-59.5			256.4	569.5	244.5	28.4	1.000057
45500.0	153.5	-59.4			250.2	569.6	245.7	26.7	1.000056
46000.0	149.8	-59.1			243.9	569.9	246.3	25.3	1.000054
46500.0	146.2	-59.6			238.5	569.4	246.7	23.9	1.000053
47000.0	142.7	-60.0			233.2	568.8	247.0	22.7	1.000052
47500.0	139.3	-60.4			228.1	568.2	247.3	21.6	1.000051
48000.0	135.9	-60.9			223.2	567.5	247.7	20.6	1.000050
48500.0	132.7	-62.0			218.8	566.1	248.1	19.6	1.000049
49000.0	129.4	-63.3			214.6	564.8	248.6	18.7	1.000048
49500.0	126.3	-63.4			209.8	564.2	249.2	18.2	1.000047
50000.0	123.2	-63.7			204.9	563.8	249.9	17.8	1.000046
50500.0	120.2	-64.0			200.2	563.4	250.5	18.1	1.000045
51000.0	117.3	-64.1			195.4	563.2	251.1	18.6	1.000044
51500.0	114.4	-63.9			190.5	563.5	251.2	17.3	1.000042
52000.0	111.6	-63.7			185.6	563.8	251.0	14.8	1.000041
52500.0	108.9	-63.8			181.2	563.7	252.2	12.2	1.000040
53000.0	106.2	-64.3			177.2	563.0	259.7	9.4	1.000039
53500.0	103.6	-64.8			173.2	562.3	273.4	6.8	1.000039
54000.0	101.1	-65.3			169.4	561.7	292.1	6.1	1.000038
54500.0	98.6	-65.7			165.5	561.2	312.5	6.1	1.000037
55000.0	96.1	-66.0			161.7	560.7	324.1	5.9	1.000036
55500.0	93.8	-66.3			157.9	560.3	332.3	5.1	1.000035
56000.0	91.4	-66.6			154.2	559.9	339.0	4.4	1.000034
56500.0	89.2	-66.9			150.6	559.5	335.5	3.7	1.000034
57000.0	87.0	-67.2			147.1	559.1	330.6	3.1	1.000033
57500.0	84.8	-67.5			143.7	558.7	325.1	2.5	1.000032
58000.0	82.7	-67.8			140.3	558.3	316.5	1.9	1.000031
58500.0	80.7	-68.1			137.0	557.9	301.2	2.2	1.000031
59000.0	78.7	-66.0			132.3	560.7	291.5	3.0	1.000029
59500.0	76.7	-65.4			128.7	561.5	288.7	3.9	1.000029
60000.0	74.8	-65.6			125.0	561.2	291.6	5.2	1.000028
60500.0	73.0	-65.8			122.0	561.0	293.5	6.4	1.000027
61000.0	71.2	-66.0			119.7	560.7	284.9	8.3	1.000027
61500.0	69.5	-66.0			116.8	560.7	279.0	10.2	1.000026
62000.0	67.8	-65.8			113.6	561.0	277.9	11.5	1.000025
62500.0	66.1	-65.6			110.9	561.3	278.3	11.9	1.000025
63000.0	64.5	-65.3			108.1	561.6	278.7	12.3	1.000024

STATION ALTITUDE 3989.00 FEET MSL
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UPPER AIR DATA
3520020535
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.9	-65.1			105.3	561.9	267.7	10.8	1.000023
64000.0	61.8	-64.9			102.6	562.2	299.7	9.6	1.000023
64500.0	59.9	-64.7			100.0	562.5	308.6	9.0	1.000022
65000.0	58.4	-64.4			97.5	562.8	311.2	8.8	1.000022
65500.0	57.0	-64.2			95.0	563.1	314.0	8.6	1.000021
66000.0	55.6	-64.0			92.6	563.4	314.8	7.8	1.000021
66500.0	54.2	-63.7			90.2	563.8	315.7	7.1	1.000020
67000.0	52.9	-63.5			87.9	564.1	320.6	6.2	1.000020
67500.0	51.6	-63.3			85.6	564.4	331.1	5.3	1.000019
68000.0	50.3	-63.1			83.5	564.7	343.9	4.5	1.000019
68500.0	49.1	-63.1			81.4	564.6	347.8	3.3	1.000018
69000.0	47.9	-63.2			79.5	564.5	356.3	2.1	1.000018
69500.0	46.7	-63.3			77.6	564.3	350.9	1.9	1.000017
70000.0	45.6	-63.5			75.8	564.1	338.4	2.5	1.000017
70500.0	44.5	-63.8			73.8	564.7	330.6	3.1	1.000016
71000.0	43.4	-62.5			71.8	565.5	328.9	3.7	1.000016
71500.0	42.4	-61.9			69.9	566.3	328.2	4.2	1.000016
72000.0	41.4	-61.3			68.1	567.0	327.9	4.6	1.000015
72500.0	40.4	-60.7			66.3	567.8	331.9	2.9	1.000015
73000.0	39.4	-60.2			64.5	568.6	348.0	1.2	1.000014
73500.0	38.5	-59.6			62.8	569.3	96.1	1.1	1.000014
74000.0	37.6	-59.0			61.1	570.1	110.0	3.4	1.000014
74500.0	36.7	-58.4			59.5	570.9	112.8	5.7	1.000013
75000.0	35.8	-57.9			57.9	571.6	121.8	6.7	1.000013
75500.0	34.9	-57.3			56.4	572.4	137.4	7.0	1.000013
76000.0	34.1	-56.7			54.9	573.1	150.9	7.7	1.000012
76500.0	33.3	-56.4			53.5	573.5	151.8	8.4	1.000012
77000.0	32.5	-56.3			52.2	573.6	151.5	8.9	1.000012
77500.0	31.7	-56.2			51.0	573.8			1.000011
78000.0	31.0	-56.1			49.8	573.9			1.000011
78500.0	30.3	-56.0			48.6	574.0			1.000011

STATION ALTITUDE 3989.00 FEET MSL
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MANDATORY LEVELS
35200205S5
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 9

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	5219.	5.0	-4.3	51.	257.4	1.3
800.0	6852.	8.2	-12.4	22.	257.9	3.4
750.0	8600.	8.1	-15.9	16.	263.9	12.3
700.0	10458.	4.5	-11.1	31.	272.9	13.7
650.0	12422.	.1	-15.0	31.	263.3	23.8
600.0	14507.	-4.7	-19.2	31.	252.3	15.2
550.0	16732.	-9.5	-24.9	17.	246.9	12.2
500.0	19137.	-12.2	-31.6	18.	251.1	24.4
450.0	21749.	-18.4	-30.3	34.	258.7	29.4
400.0	24592.	-25.7	-36.3	30.	256.6	41.2
350.0	27717.	-33.8	-40.4	31.	249.7	52.4
300.0	31205.	-41.0	-47.5	49.	241.2	65.8
250.0	35206.	-48.5			242.8	69.9
200.0	39928.	-57.4			243.5	65.1
175.0	42680.	-59.4			242.0	41.3
150.0	45852.	-59.1			246.2	25.4
125.0	49566.	-63.5			249.5	18.1
100.0	54047.	-65.5			299.8	6.0
80.0	58472.	-67.5			297.9	2.4
70.0	61152.	-66.1			281.3	9.5
60.0	64210.	-64.7			308.1	9.0
50.0	67877.	-63.0			344.5	4.3
40.0	72393.	-60.5			334.2	2.4
30.0	78353.	-56.0				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.